

KEY TO THE MALES OF THE GENUS ATYPHLOCERAS
WITH A DESCRIPTION OF THE MALE OF
ATYPHLOCERAS ECHIS

(Siphonaptera)

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ATYPHLOCERAS ECHIS Jordan and Rothschild

Atyphloceras echis Jordan and Rothschild. 1915. Ectoparasites, 1(1):59-60, text-fig. 64. Description of female only (1 female), from Paradise, Arizona, on *Mus* sp. Also description of genus *Atyphloceras*, p. 59, genotype *Ceratophyllus multidentatus*, C. Fox, 1909.

Male. *Head*: Eye lightly pigmented, more degenerate than in *A. multidentatus*. Labial palpus of 7 joints, reaching to or just short of apex of fore trochanter. *Thorax*: Pronotal comb composed of 20 spines. *Abdomen*: The number of apical spines (Ap. sp.) on the abdominal tergites (total of both sides) is as follows: I = 6, II = 11, III = 8, IV = 10, V = 6, VI = 5. There are 3 antepygial bristles (Ap. br.) on each side. The lengths of these are as follows: upper = 0.11 mm., middle = 0.23 mm., lower = 0.15 mm. *Modified segments*: Manubrium of clasper (M) triangular, pointed, short, and broad at the base. Immovable process of clasper (P) short, bilobed, the apices rounded, armed with 7 bristles, 3 of which are large and are situated on apical margin of upper lobe. Movable finger (F) of clasper long with both margins convex on apical half, its rear margin provided with 3 long, thin bristles. Length of movable finger (apex to base of ventral bow), 0.29 mm. Penis (Pen.) large, thick, club-shaped. External or postero-ventral arm of sternite IX rounded ventrally, spoon-shaped or ladle-shaped, not triangular. Sternite VIII moderately sinuate, with 3 large bristles near apex.

In this species the manubrium is somewhat shorter and thicker at the base than in other *Atyphloceras*, the immovable process is similar to *A. longipalpus* Stewart, but shorter than in *A. multidentatus* and much shorter than in *A. felix*. The movable finger is similar to that of *A. longipalpus* and *A. felix*. The external arm of the ninth sternite is characteristic for the species, differing from all other known species of the genus but most similar to that of *A. longipalpus*.

Total length, 2.3 mm. Length of hind femur, 0.41 mm.

Description of male from one specimen collected in Greenlee County, Arizona, 25 miles south of Duncan (near the junction

of Greenlee and Cochise Counties, Arizona and Hidalgo County, New Mexico), elevation 4,500 feet, from *Peromyscus maniculatus*, November 16, 1938, by F. J. Gonderman of the U. S. Public Health Service Plague Survey. Allotype in the collection of the U. S. Public Health Service, Plague Suppressive Measures Laboratory, San Francisco, California.

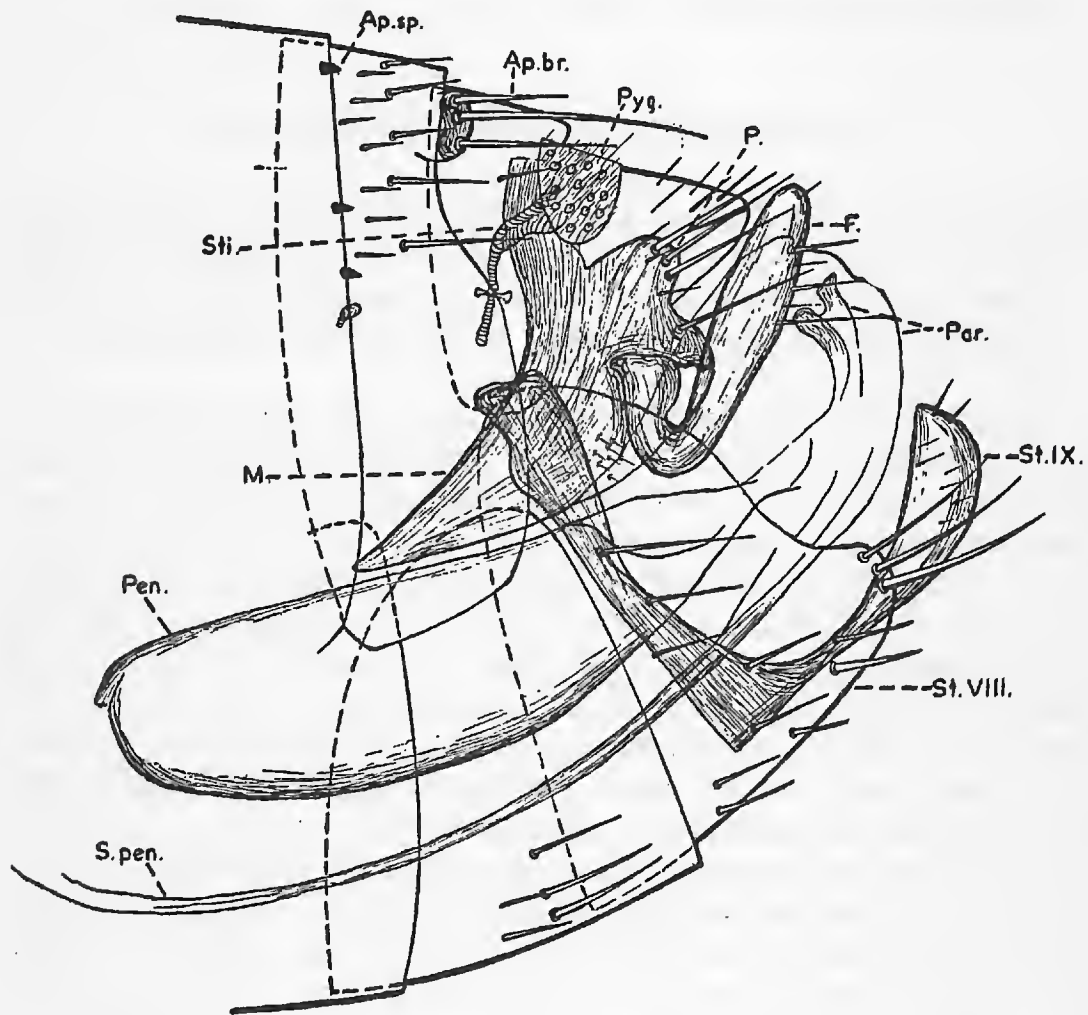


Figure 1. *Atyphloceras echis* J. and R., male, genital segments. Abbreviations: Ap. br., antepygidial bristles; Ap. sp., apical spines; F., movable finger of clasper; M., manubrium of clasper; P., immovable process of clasper; Par., paramere of penis; Pen., penis; Pyg., pygidium; S. pen., spring of penis; St., sternite; Sti., stigma.

There is also in the above collection one female from *Neotoma albigula*, Grant County, New Mexico, which agrees quite well with the original description of *A. echis* by Jordan and Rothschild and obviously belongs to this species.

A. artius Jordan, 1933, from British Columbia is not included in the following Key because the male is unknown.

KEY TO THE MALES OF ATYPHLOCERAS

1. External arm of ninth sternite narrow, rod-shaped, not thickened near apex; labial palpus of 5 segments; frontal tubercle distant from anterior oral angle. (from New York state)*bishopi* Jordan 1933
- External arm of ninth sternite broadened or triangular near apex; labial palpus of from 6 to 9 (usually 7) segments; frontal tubercle close to anterior oral angle. (from western North America)2
- 2(1). External arm of ninth sternite triangular with a prominent postero-ventral angle; immovable process of clasper moderately long and pointed.....3
- External arm of ninth sternite spoon- or pod-shaped, rounded ventrally, without a postero-ventral angle; immovable process short, broad4
- 3(2). Immovable process and movable finger longer and narrower; internal arm of ninth sternite broader; external arm of ninth sternite with dilated apex elongate-triangular; eighth sternite slightly sinuate. (from Ventura County, and Monterey County, California).....*felix* Jordan 1933
- Immovable process and movable finger shorter and thicker; internal arm of ninth sternite narrow; dilated portion of external arm of ninth sternite triangular; eighth sternite with a rather deep sinus. (San Francisco, California).....*multidentatus* (C. Fox) 1909
- 4(2). Manubrium triangular, short; external arm of ninth sternite spoon-shaped or ladle-shaped. (from southeastern Arizona and southwestern New Mexico).....*echis* J. & R. 1915
- Manubrium elongate; external arm of ninth sternite pod-shaped. (from Monterey County, California).....*longipalpus* Stewart 1940

FEMALE MUTILLIDS EATING BUTTER

Several times during late August, 1941, females of *Dasymutilla ursula* (Cresson) were observed on the hot sandy beach at Okanagan Landing, near Vernon, B. C. Some were hurrying about on the sand, but many were feeding avidly on the film of salty butter on corn cobs left by picnickers. The velvet ants were so engrossed in their meal that they did not stir until touched, and even then only moved to another part of the cob. Females of one species, *D. ursula* (identified by Dr. C. E. Mickel) were seen feeding in this manner, but it is possible that some of the rarer species could be attracted with a similar bait.—HUGH B. LEECH.